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Case Report

For whom the desert bell tolls: heat stroke or stroke

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Abstract

Heat stroke is the most complicated and dangerous amongst heat injuries that can lead to irreversible injury and even death with itself or with creating predisposibility to different diseases. The following case report depicts a patient who presented primarily with impairment of consciousness after walking 45 km in the summer heat to cross the Syria-Turkey border and later syncope. This case report aims to highlight the possibility of higher co-incidence with heat stroke and stroke.

Keywords: Refugee, Stroke, Heat

Introduction

Heat stroke is a fatal illness with the plate-mark presentation of core body temperature greater than 40°C and impaired level of consciousness (1). Mortality has been reported to be as high as 50%, and the illness is often misdiagnosed in the Emergency Department (ED) (2).

Case Presentation

A 46-year-old man was found having syncope on a hot summer day. The paramedics found him in Syria-Turkey border crossing. They injected an intravenous of normal saline prior to arrival and a finger stick revealed a blood glucose level of 136 mg/dL. On arrival in the ED, his temperature was 41.1°C (106°F), and the other vital signs were normal. He was moaning and flailing his arms and legs at staff. Depending on the patient's clinical status, supportive treatment may include administering supplemental oxygen, establishing adequate intravascular access, restoring intravascular volume with intravenous isotonic crystalloid solution, and placing a bladder catheter to monitor urine output. After treatment, the patient was afebrile and conscious and his general symptoms improved after 2 hours. The patient stated that he walked 45 km in the summer heat to cross the Syria-Turkey border and then lost consciousness. Ataxia was detected on patient's physical examination. Patient's laboratory values were in the normal range and normal sinus rhythm was detected on patient's electrocardiography (ECG). As patient's neurological symptoms continued despite treatment, he was taken for a brain tomography. There were no pathological findings on the patient's tomography, so for differential diagnosis, brain magnetic resonance imaging (MRI) was requested. MRI showed an acute cerebellar infarct in the left posterior inferior cerebellar artery territory (Figure 1). Hence, for this patient, in the absence of possible stroke time determination, we could not provide tPA thrombolysis. The patient was given aspirin (300 mg orally) and received consultation from a neurologist. He was admitted to the intensive care unit.

Conclusion

Heat stroke is distinguished from other heat illnesses by a loss of thermoregulation, tissue damage, and multi-organ failure. Classically, these patients are presented with hyperpyrexia and central nervous system dysfunctions (3). It is necessary to notice that heat stroke increases the

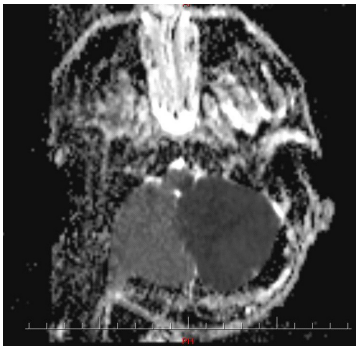

Figure 1. MRI showed an acute cerebellar infarct in the left posterior inferior cerebellar artery territory.

incidence of stroke and for this reason investigations must be shaped in the light of this information.

Ethical issues

The authors declare no ethical issues.

Authors' contributions

All authors have equal portion to write this paper.

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